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Theodore Naccarella
Synnestvedt & Lechner LLP
2600 Aramark Tower
1101 Market Street
Philadelphia, PA 19107-2950

EXAMINER	
RYMAN, DANIEL J	

ART UNIT	PAPER NUMBER
2665	7

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/577,506	Applicant(s) QURESHI ET AL.	
	Examiner Daniel J. Ryman	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 April 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-13,15-24 and 26-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-13,15-24 and 26-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 4/7/2004 have been fully considered but they are not persuasive. On pages 11-16 Applicant argues, with respect to claims 1, 17, and 29, that Berger "has nothing to do with dynamically resizing virtual pipelines or protecting network performance criteria since Berger relates to a one-time determination of the initial network bandwidth allocation as the network is being designed". Examiner, respectfully, disagrees. Berger discloses taking measurements in a network and using these measurements to perform dimensioning. For instance, Berger discloses taking measurements at a node and on a link in order to estimate the number of active connections and the number of potential connections sharing a link (col. 13, lines 6-12). Berger then uses these estimates in order to perform dimensioning through the lambda * f value (col. 11, lines 25-47 and col. 12, line 66-col. 13, line 12). Berger also discloses determining the number of active connections on a network link and then using this number for dimensioning of the link and for ensuring that the performance objectives are satisfied (col. 11, line 62-col. 12, line, 39). Finally Berger explicitly recognizes that the assumptions used for dimensioning the network will be different from the actual values once the network is placed into service (col. 9, lines 32-45). Given these disclosures in Berger, Examiner maintains that Berger discloses, or at the very least suggests, resizing virtual pipelines and protecting network performance criteria.

2. Applicant additionally argues that the connection admission control (CAC) does not resize the connections. Again, Examiner, respectfully, disagrees. Berger discloses that CAC determines a maximum number of permissible connections on a link (N*) based upon the

determined transfer rate for each connection (u) (col. 9, line 57-col. 10, line 49) where the transfer rate for each connection can be estimated based on measurements taken at a node and on the network (col. 13, lines 6-12). Therefore Berger suggests that if the transfer rate for each connection changes then the maximum number of permissible connections will also change which will lead to a change in the size of each connection. As such, Examiner maintains that Berger suggests that the CAC can resize connections.

3. Furthermore, Examiner notes that the claims of Berger do not limit the dimensioning of the links to only occurring before the network is placed into service. Rather Berger's claimed method for the dimensioning of the links can occur at any time. Therefore, Examiner maintains that Berger discloses, or at the very least suggests, resizing virtual pipelines and protecting network performance criteria.

4. On page 17, Applicant argues that Examiner cannot reject claims 4, 20, and 35 since Applicant did not disclose as prior art that the first equation should be used in the first situation and the second equation should be used in the second situation. In response, Examiner, respectfully, submits that Applicant has misunderstood Examiner's rejection as well as Examiner's previous response. Examiner is not stating that Applicant has disclosed as prior art that the first equation should be used in the first situation and the second equation should be used in the second situation. Rather, Examiner's position is that one of ordinary skill in the art would recognize the limitations of the formulas that Applicant has admitted are prior art. Therefore one of ordinary skill in the art would be motivated to use each equation in its respective aforementioned situation in order to compensate for the limitations of the equations. Again, Examiner reiterates that on page 21 of the specification, Applicant discloses that the well-known

Erlang formula can be applied with a non-stationary offered load for a non-stationary system. In this passage, Applicant discloses that two non-stationary equations may be used where "Equation 2a is usually referred to as a point-wise stationary approximation (PSA), while equation 2b is referred to as a modified offered load (MOL) approximation". By using language such as "usually referred to", Applicant implicitly discloses that these equations are well known in the art. If these equations were novel, Applicant would not disclose that these equations are usually referred to as PSA or MOL. Given that the Erlang formula, the PSA formula, and the MOL formula are well known in the art, the mathematical relationships between the equations would also be known in the art. Therefore the fact that "the PSA approximation tends to overestimate the blocking probability while the MOL approximation tends to underestimate the blocking probability" (specification, page 21, lines 15-18) would be well known in the art. Given this fact, the limitations of claims 4, 20, and 35 are obvious in view of the prior art. As such, Examiner maintains the rejection of claims 4, 20, and 35.

5. Given the above arguments, Examiner maintains the rejection of the claims. Examiner urges Applicant to amend the claims to add further limitations which will distinguish the claims from the prior art.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 17, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (USPN 6,266,322) in view of Selinger (USPN 6,345,038).

8. Regarding claims 1, 17, and 29, Berger discloses a method of and apparatus for reconfiguring pipeline sizes in order to relieve congestion in a packet-based network (col. 1, lines 13-21), said network comprising a plurality of gateway nodes (ref. 11) having data to be transferred therebetween (Fig. 1 and col. 1, lines 31-52), and utilizing a concept of virtual pipelines (links) between nodes (gateway) of said network (col. 1, lines 39-52 and col. 5, line 57-col. 6, line 11), said pipelines comprising one or more channels (abstract; col. 3, lines 6-19; and col. 5, line 57-col. 6, line 11), said method comprising the steps of and apparatus comprising means for: (1) identifying congested (bottlenecked) links (col. 4, lines 63-67; col. 6, lines 13-31; col. 7, lines 8-11; col. 7, lines 15-21; col. 7, line 22-col. 8, line 63; col. 9, line 32-col. 10, line 40; col. 11, lines 36-47; and col. 12, line 10-col. 13, line 12, esp. col. 12, line 66-col. 13, line 12); (2) for virtual pipelines that are congested, determining pipeline size that would cause said traffic through said pipeline to not be congested (col. 3, lines 6-33; col. 6, lines 13-31; col. 7, line 8-col. 8, line 63; col. 9, line 32-col. 10, line 40; col. 11, lines 36-47; and col. 12, line 10-col. 13, line 12, esp. col. 12, line 66-col. 13, line 12); and (3) for each pipeline that can be increased in size, increasing its size to said size determined in step (2) (col. 4, lines 63-67; col. 6, lines 13-31; col. 7, line 8-col. 8, line 63; col. 9, line 32-col. 10, line 40; col. 11, lines 36-47; and col. 12, line 10-col. 13, line 12, esp. col. 12, line 66-col. 13, line 12). Berger does not disclose identifying a first set of virtual pipelines for which traffic exceeds a predetermined threshold. Selinger discloses, in a system for improving access to congested networks, that congestion is defined as traffic on a link exceeding a defined limit of congestion (threshold) (col. 1, line 66-col. 2, line 9). Since

congestion is defined as traffic exceeding a defined limit of congestion (threshold), it would have been obvious to one of ordinary skill in the art at the time of the invention to identify the congested links as being a first set of virtual pipelines for which traffic exceeds a predetermined threshold.

9. Claims 2, 18, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (USPN 6,266,322) in view of Selinger (USPN 6,345,038) as applied to claim 1 above, and further in view of Jurkevich et al (USPN 5,164,938).

10. Regarding claims 2, 18, and 33, referring to claims 1, 17, and 29, Berger in view of Selinger discloses that the predetermined threshold is can be any defined limit of congestion (Selinger: col. 1, line 66-col. 2, line 2) and wherein step (2) comprises determining a minimum pipeline size that would reduce the defined limit of congestion for said pipeline below said predetermined threshold based on based on call arrival rate at said virtual pipeline and average holding time per call (Berger: col. 3, lines 6-33; col. 6, lines 13-31; col. 7, line 8-col. 8, line 63; col. 9, line 32-col. 10, line 40; col. 11, lines 36-47; and col. 12, line 10-col. 13, line 12, esp. col. 12, line 66-col. 13, line 12 and Selinger: col. 1, line 66-col. 2, line 9) where Selinger teaches that increased link bandwidth results in a greater acceptance rate of calls (Selinger: col. 1, line 66-col. 2, line 9). Berger in view of Selinger does not disclose that the defined limit of congestion is a call-blocking ratio. Jurkevich teaches, in a system for relieving congestion on a network, using a call blocking ratio as a congestion threshold in order to control quality (col. 21, lines 36-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a call blocking ratio as a congestion threshold in order to control quality.

11. Claims 3, 4, 12, 13, 15, 16, 19-24, 26-28, and 34-36, are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (USPN 6,266,322) in view of Selinger (USPN 6,345,038) in further view of Jurkevich et al (USPN 5,164,938) as applied to claims 2, 18, and 33 above, and further in view of Applicant's admitted prior art.

12. Regarding claims 3, 19, and 34, referring to claims 2, 18, and 33, Berger in view of Selinger in further view of Jurkevich discloses that the minimum pipeline size is expressed as a number of channels, M (Berger: N*), in said pipeline (Berger: col. 3, line 66-col. 4, line 6; col. 6, lines 13-31; col. 7, line 8-col. 8, line 63; col. 9, line 32-col. 10, line 40; col. 11, lines 36-47; and col. 12, line 10-col. 13, line 12, esp. col. 12, line 66-col. 13, line 12). Berger in view of Selinger in further view of Jurkevich does not expressly disclose that step (2) comprises determining a number of channels M by the given equation; however, Berger in view of Selinger in further view of Jurkevich does disclose using an Erlang blocking model for determining dimensioning of links (Berger: col. 2, lines 20-44). Applicant admits that the given equation is a well-known Erlang blocking formula (page 20, line 6-page 22, line 17). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the given equation since it is a well-known Erlang blocking formula where Berger in view of Selinger in further view of Jurkevich disclose using an Erlang blocking model.

13. Regarding claims 4, 20, and 35, referring to claims 3, 19, and 34, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses that p(t)=lambda((t)/u(t)) is used when call rate through said pipeline has been historically increasing and p'(t)=lambda(t)-p(t)/u(t) is used when call rate through said pipeline has been historically decreasing (Applicant's admitted prior art: page 20, line 6-page 22, line 17).

14. Regarding claims 12 and 23, referring to claims 3 and 20, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses that the network is an asynchronous transfer mode network (Berger: col. 3, lines 15-19; col. 4, lines 63-67; col. 6, lines 13-31; col. 7, line 8-col. 8, line 63; col. 9, line 32-col. 10, line 40; col. 11, lines 36-47; and col. 12, line 10-col. 13, line 12, esp. col. 12, line 66-col. 13, line 12).

15. Regarding claims 13 and 24, referring to claims 12 and 24, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses that the network is used to exchange voice data (Berger: col. 1, lines 24-28).

16. Regarding claims 15 and 26, referring to claims 3 and 20, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses that the network interconnects a plurality of other networks (Berger: Fig. 1 and col. 1, lines 31-52 and Selinger: Fig. 9, ref. 108).

17. Regarding claims 16 and 27, referring to claims 15 and 26, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses that the other networks comprises time division multiplexed networks (Berger: Fig. 1 and col. 1, lines 31-52; Selinger: Fig. 9, ref. 108; and Jurkevich: Fig. 8 and col. 1, line 25-col. 2, line 22).

18. Regarding claims 21 and 36, referring to claims 19 and 34, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses steps of: (3) identifying a second set of virtual pipelines for which traffic is less than said predetermined threshold (Berger: col. 7, lines 8-20; col. 11, lines 36-47; and col. 12, line 66-col. 13, line 12); and (4) for each pipeline in said second set, determining a size of the smallest pipeline that can

accommodate the traffic present in that pipeline (Berger: col. 7, lines 8-20; col. 11, lines 36-47; and col. 12, line 66-col. 13, line 12).

19. Regarding claim 22, referring to claim 21, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art does not disclose the step of: (10) calculating a peak cell rate corresponding to said number of channels determined in step (2). Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses calculating the probability that a connection will exceed a given bit rate (Berger: col. 3, lines 29-33 and col. 8, lines 30-32) where the probability of exceeding the given rate is very small. It would have been obvious to one of ordinary skill in the art at the time of the invention that the given rate is similar to the peak cell rate since the peak cell rate is a given rate at which the probability of exceeding the given rate is very small.

20. Regarding claim 28, referring to claim 27, Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses that the other networks comprise public service telephone networks (Berger: Fig. 1 and col. 1, lines 31-52; Selinger: Fig. 9, ref. 108; and Jurkevich: Fig. 8 and col. 1, line 25-col. 2, line 22).

21. Claims 6, 7, 9-11, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (USPN 6,266,322) in view of Selinger (USPN 6,345,038) as applied to claims 1 and 29 above, and further in view of Matthews et al (USPN 6,084,858).

22. Regarding claims 6 and 30, referring to claims 1 and 29, Berger in view of Selinger does not disclose the steps of: (4) for each pipeline that cannot be resized in accordance with step (3), determining if a path exists that can accommodate a pipeline of said size determined in step (2); and (5) for each pipeline for which a path exists that can accommodate a pipeline of said size

determined in step (2), creating a pipeline having said size, and directing all new channels between the corresponding gateway nodes through said newly created pipeline. Matthews teaches, in a system for avoiding congestion on a link, for each link that is congested, determining if a path exists that can accommodate a link of equivalent size (col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4), where it is implicit that the preferred alternate links will have an equivalent bandwidth unless the link is congested, and for each congested link for which a path exists that can accommodate a pipeline of equivalent size creating a link having said size (col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4), and directing all new channels between the corresponding gateway nodes through said newly created link (col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4) in order to balance load across a network such that network efficiency is improved (col. 3, lines 22-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to distribute the load over other connections in the network when the resizing method fails in order to balance load across a network such that network efficiency is improved.

23. Regarding claims 7 and 31, referring to claims 6 and 30, Berger in view of Selinger in further view of Matthews suggests the steps of: (6) deleting each pipeline in said second set for which a new pipeline was created in step (5) when no channels are utilizing said pipeline (Matthews: col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4).

24. Regarding claim 9, referring to claim 7, Berger in view of Selinger in further view of Matthews discloses steps of: (7) identifying a second set of virtual pipelines for which traffic is less than said predetermined threshold (Berger: col. 7, lines 8-20); and (8) for each pipeline in

said second set, determining a size of the smallest pipeline that can accommodate the traffic present in that pipeline while satisfying said predetermined threshold (Berger: col. 7, lines 8-20).

25. Regarding claim 10, referring to claim 9, Berger in view of Selinger in further view of Matthews discloses the steps of: (9) reducing the size of each of said pipelines in said second set that can be reduced in size to said size determined in step (8) (Berger: col. 7, lines 8-20); (12) for each pipeline that cannot be resized in accordance with step (10), determining if a path exists that can accommodate a pipeline of said size determined in step (8) (Matthews: col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4); and (11) for each pipeline for which a path exists that can accommodate a pipeline of said size determined in step (8), creating a pipeline having said size, and directing all new channels between the corresponding gateway nodes through said pipeline (Matthews: col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4).

26. Regarding claim 11, referring to claim 10, Berger in view of Selinger in further view of Matthews discloses the steps of: (12) deleting each pipeline in said second set for which a new pipeline was created in step (11) when no channels are utilizing said pipeline (Matthews: col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4).

27. Claims 8 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (USPN 6,266,322) in view of Selinger (USPN 6,345,038) in further view of Matthews et al (USPN 6,084,858) as applied to claims 7 and 31 above, and further in view of Fedyk et al (USPN 5,848,055).

28. Regarding claims 8 and 32, referring to claims 7 and 31, Berger in view of Selinger in further view of Matthews possibly does not disclose the steps of: (7) for each pipeline in said

first set that cannot be resized in step (3) and for which an alternate path is determined in step (4) not to exist, determining if a pipeline can be created that can accommodate a fraction of said channels in said pipeline by which said pipeline exceeds said threshold; (8) creating a new pipeline of a size corresponding to said fraction of channels determined in step (7) and directing said fraction of new channels from said pipeline to said new pipeline. Fedyk teaches, in a system for establishing an alternate path (additional pipeline), having the alternate path request a bandwidth that is above the bandwidth reserved by the active path in order to not over utilize trunks (col. 4, lines 7-21). It would have been obvious to one of ordinary skill in the art at the time of the invention to establish an additional pipeline (alternate path) with the additional pipeline accommodating a fraction of said channels in said pipeline by which said pipeline exceeds said threshold in order to not over utilize trunks.

29. Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (USPN 6,266,322) in view of Selinger (USPN 6,345,038) in further view of Jurkevich et al (USPN 5,164,938) in further view of Applicant's admitted prior art as applied to claim 36 above, and further in view of Matthews et al (USPN 6,084,858).

30. Regarding claim 37, referring to claim 36, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art discloses means for reducing the size of each of said pipelines in said second set that can be reduced in size to said smallest size (Berger: col. 7, lines 8-20; col. 9, line 32-col. 10, line 40; col. 11, lines 36-47; and col. 12, line 10-col. 13, line 12, esp. col. 12, line 66-col. 13, line 12). Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art does not disclose means for determining, for each pipeline that cannot be resized, if a path exists that can accommodate a

pipeline of said smallest size; and means for creating, for each pipeline for which a path exists that can accommodate a pipeline of said smallest size, a virtual pipeline having said size, and for directing all new channels between the corresponding nodes (gateways) through said pipeline. Matthews teaches, in a system for avoiding congestion on a link, for each link that is congested, determining if a path exists that can accommodate a link of equivalent size (col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4), where it is implicit that the preferred alternate links will have an equivalent bandwidth unless the link is congested, and for each congested link for which a path exists that can accommodate a pipeline of equivalent size creating a link having said size (col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4), and directing all new channels between the corresponding gateway nodes through said newly created link (col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4) in order to balance load across a network such that network efficiency is improved (col. 3, lines 22-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to distribute the load over other connections in the network when the resizing method fails in order to balance load across a network such that network efficiency is improved.

31. Regarding claim 38, referring to claim 37, Berger in view of Selinger in further view of Jurkevich in further view of Applicant's admitted prior art in further view of Matthews discloses means for deleting each pipeline in said second set for which a new pipeline was created when no channels are utilizing said pipeline (Matthews: col. 3, lines 22-42; col. 3, lines 48-52; and col. 4, line 44-col. 5, line 4).

Conclusion

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Berthaud et al (USPN 6,011,776) see col. 4, line 63-col. 5, line 38 which pertains to adapting the bandwidth of flows of traffic in order to avoid congestion. Lin (USPN 5,475,615) see col. 1, line 62-col. 3, line 10 which pertains to determining a number of active circuits in order to meet required blocking probability constraints.

33. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel J. Ryman
Examiner
Art Unit 2665

Daniel J. Ryman

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600